



Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel¹

This standard is issued under the fixed designation B695; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This specification covers the requirements for a coating of zinc mechanically deposited on iron and steel basis metals. The coating is provided in several thicknesses up to and including 107 μm. The seven thickest classes are usually referred to as “mechanically galvanized.”

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

NOTE 1—The performance of this coating complies with the requirements of Specification A153/A153M and MIL-C-81562.

1.3 The values stated in SI units are to be regarded as the standard. The inch-pound equivalents of SI units are given for informational purposes.

2. Referenced Documents

2.1 ASTM Standards:²

A153/A153M Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

A194/A194M Specification for Carbon Steel, Alloy Steel, and Stainless Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both

A325 Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength (Withdrawn 2016)³

A490 Specification for Structural Bolts, Alloy Steel, Heat Treated, 150 ksi Minimum Tensile Strength (Withdrawn 2016)³

A563 Specification for Carbon and Alloy Steel Nuts

B117 Practice for Operating Salt Spray (Fog) Apparatus

B183 Practice for Preparation of Low-Carbon Steel for Electroplating

B242 Guide for Preparation of High-Carbon Steel for Electroplating

B322 Guide for Cleaning Metals Prior to Electroplating

B487 Test Method for Measurement of Metal and Oxide Coating Thickness by Microscopical Examination of Cross Section

B499 Test Method for Measurement of Coating Thicknesses by the Magnetic Method: Nonmagnetic Coatings on Magnetic Basis Metals

B571 Practice for Qualitative Adhesion Testing of Metallic Coatings

B602 Test Method for Attribute Sampling of Metallic and Inorganic Coatings

B697 Guide for Selection of Sampling Plans for Inspection of Electrodeposited Metallic and Inorganic Coatings

B762 Test Method of Variables Sampling of Metallic and Inorganic Coatings

F1470 Practice for Fastener Sampling for Specified Mechanical Properties and Performance Inspection

2.2 Military Standard:

MIL-C-81562 Coating, Cadmium, Tin Cadmium and Zinc (Mechanically Deposited)⁴

2.3 AISC Standard:

Specifications for Structural Joints Using ASTM A325 or A490 Bolts⁵

3. Classification

3.1 *Classes*—Zinc coatings are classified on the basis of thickness, as follows:

⁴ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098

⁵ Available from American Institute of Steel Construction (AISC), One E. Wacker Dr., Suite 700, Chicago, IL 60601-2001, <http://www.aisc.org>.

¹ This specification is under the jurisdiction of ASTM Committee B08 on Metallic and Inorganic Coatings and is the direct responsibility of Subcommittee B08.06 on Soft Metals.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.